

ABSTRACT OF THE DISCLOSURE

5 A system, device, and method for supporting multiple virtual private networks in an MPOA/NHRP communication network involves encoding a Virtual Private Network (VPN) identifier in certain MPOA/NHRP control messages in order to associate those MPOA/NHRP control messages with a particular VPN, and using an in-band signaling technique to add/remove VPNs to/from a connection. Packets from multiple VPNs are multiplexed over the connection. Each packet is associated with a particular VPN. If packets do not inherently
10 include information from which the VPN can be ascertained, then a VPN identifier is encoded in the packet. The VPN identifier may be encoded in the packet via a tagging mechanism, in which each VPN is associated with a unique tag, and a tag is included in each packet. The VPN identifier may alternatively be encoded in the packet by including the VPN identifier in the packet, for example, in a header (such as an LLC/SNAP header) within the packet.